

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Patent Application No. 09/694,057

AMENDMENTS TO THE DRAWINGS

Please remove Figure 1 and replace with Replacement Figure 1.

Attachment: Replacement Sheet

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REMARKS

Claims 11-14 are all the claims pending in the application, with claim 11 being in independent form. Upon entry of the present Amendment, claims 11-14 are amended. No new matter is presented.

To summarize the Office Action, the Examiner objected to the drawings and the specification, rejected claims 11-14 under 35 U.S.C. § 112, second paragraph, rejected claims 12-14 under 35 U.S.C. § 112, first paragraph, and rejected claim 11 under 35 U.S.C. § 103(a) based on Blankenship (U.S. Patent No. 4,310,339) in view of Sharp (U.S. Patent No. 4,867,776), further in view of Mimura et al. (U.S. Patent No. 4,729,777, hereinafter "Mimura"). The outstanding objections and rejections are addressed as follows.

Objection to the Drawings

The Examiner objected to the drawings for failing to include reference character 12. Applicant notes that replacement Figure 1 is presented with the present Amendment and depicts element 12, which was previously omitted inadvertently. Therefore, Applicant requests the withdrawal of this ground of objection.

Additionally, the Examiner objected to the drawings for failing to comply with 37 C.F.R. § 1.84(p)(4) for the use of reference character 12 to depict both a servo control means and a computer. In response, Applicant refers the Examiner to the third paragraph of page 8 (see lines 22-27), which states that the positioning means (reference number 11) may be servo-controlled continuously, and to page 7, line 10, which states that the computer controls the

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positioning means 11. Further, Applicant notes that replacement Figure 1 depicts element 12 as a single element. Therefore, Applicant respectfully submits that element 12, as depicted in replacement Figure 1, does not designate different parts, and removal of this ground of objection is requested.

Objection to the Specification

The Examiner objected to the title as being non-descriptive. Applicant submits that this ground of objection is moot in view of the amendment to the title, and requests the objection be withdrawn.

Also, the specification is objected to for failing to provide antecedent basis for the “servo-controller” of claim 12. In response, Applicant notes that page 6, line 36 - page 7, line 2 describes the servo-control means, which Applicant submits provides sufficient antecedent support for the element as claimed. Accordingly, Applicant respectfully requests the withdrawal of this ground of objection.

Further, the Examiner objected to the specification for failing to describe Figure 1 in the detailed description. In response, Applicant has amended the specification to specifically refer to Figure 1 in the detailed description. Applicant therefore requests the withdrawal of this ground of objection.

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Claim Rejections - 35 U.S.C. § 112, second paragraph

Claims 11-14 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Specifically, the Examiner indicated that it is unclear whether “said preform” at line 8 of claim 11 refers to the preform of line 1 or the preform of line 2. Also, the Examiner indicated that the term “installation” of claim 11 rendered the claim indefinite. In response, Applicant submits that these grounds of rejection are moot in view of the amendments to claims 11-14 and respectfully requests this ground of rejection be withdrawn.

Further, the Examiner indicated that the antecedent support for “rotatable wheels” in claim 13 was unclear. Claim 13 now recites that the plurality of rotatable wheels are “in addition to” the rotatable wheel of claim 11. Therefore, Applicant requests the withdrawal of this ground of rejection.

Claim Rejections - 35 U.S.C. § 112, first paragraph

Claims 12-14 stand rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. Specifically, the Examiner indicated that the “servo-controller” is not supported by the specification. As noted above with respect to the objection to the specification, page 6, line 36 - page 7, line 2 describes the servo-control means (i.e., computer 12, which is further described at page 7, lines 3-10 and 28-35, among elsewhere) which Applicant submits provides sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention.

Further, the computer is depicted as element 12 in replacement Figure 1, as discussed above with

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reference to the drawing objections. Accordingly, Applicant respectfully requests the withdrawal of this ground of objection.

Claim Rejections - 35 U.S.C. § 103

Claim 11 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Blankenship in view of Sharp, further in view of Mimura. Applicant traverses this ground of rejection.

As described in the specification, the conventional installation for manufacturing or building-up preforms includes a horizontal axis of rotation. (Specification at page 1, lines 11-21). Further, the horizontal rotation may lead to the preform sagging under its own weight, which may result in breaking an end-piece of the preform, as well as adverse effects on the uniformity of a preform. (Specification at page 2, lines 13-17).

As defined by claim 11, the apparatus which supports a preform having a supporting core comprising, *inter alia*, a rotation mechanism that rotates the supporting core of the preform about a horizontal axis, and a rotatable wheel which (1) has a rotational axis which is parallel to the supporting core, (2) is mounted to rotate freely, and (3) includes a tread strip which comes into tangential contact with the preform.

Applicant submits that Blankenship fails to disclose or suggest the claimed apparatus. In contrast to the apparatus defined by claim 11, the apparatus of Blankenship is a vertically oriented. (Blankenship at col. 7, lines 19-30). Indeed, there is no contemplation whatsoever in Blankenship for a horizontal orientation, as required by claim 11. Furthermore, Blankenship

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fails to disclose a rotatable wheel which is mounted to rotate freely. For instance, Figure 4 of Blankenship illustrates a means 36 for supporting, rotating and translating the preform as it is being formed. (Blankenship at col. 7, lines 56-68). It is understood that rotation of the preform may be in the same direction as the rotation of starting member 10 or may be in the opposite direction. Further, means 36 is more fully described with reference to Figure 5, where means 36 comprise one or more sets of three or more planetary drive wheels 37 designed and disposed to exert a force toward the longitudinal axis of consolidated preform 34 to effect both support and rotation of the entire preform or article. (Blankenship at col. 8, lines 1-17). The planetary drive wheels are driven by motor 38 and associated gearing. By tilting the axis of one or more of the planetary drive wheels, whereby the axis thereof is not parallel to the longitudinal axis of preform 34, the wheel or wheels will also exert a longitudinal force of the preform thus providing translation motion as well as rotation.

Thus, the wheels of Blankenship are driven by a motor in order to rotate the preform. Therefore, Blankenship completely fails to provide any teaching or suggestion for the wheel as claimed in claim 11, which is not driven, but rotates freely. Further, the wheel of claim 11 rotates about a horizontal axis, not a vertical axis, as taught by Blankenship. Moreover, there is no mention in Blankenship of the tread strip, as claimed.

Furthermore, Applicant submits that neither Sharp nor Mimura compensate for the deficient teaching of Blankenship. For instance, Sharp relates to an apparatus for integrally forming a lens or shape on the end of a fiber, preferably an optical fiber. (*see* Sharp at col. 1, lines 57-59). The advancing motor 53 has a drive wheel 54 disposed on an end thereof.

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However, Sharp fails to disclose a rotatable wheel which has either a horizontal rotational axis, nor is the rotatable wheel mounted to rotate freely. In contrast, wheel 54 of Sharp is a drive wheel, wherein the wheel as defined by claim 11 can freely rotate.

As to Mimura, the teaching of Mimura relates to a method for manufacturing preform wherein glass melt 21 is poured into metallic mold 22 wherein a vertical moving rod, which has been held in contact with the tips of the nozzles to inhibit the passage therethrough of the glass melts from the crucibles, is gradually moved downward to thereby draw the glass out of the nozzles. Thus, the glass drawn out in this manner is cooled for solidification, thereby obtaining a preform for the fluoride glass fiber. However, Mimura fails to disclose a rotatable wheel which has any of the features recited in claim 11. For instance, Mimura fails to disclose a rotatable wheel which has a horizontal rotational axis, is mounted to rotate freely, or includes a tread strip.

Moreover, the portion of Mimura relied upon by the Examiner (column 4, lines 24-30) is related to a manufacturing method employing a mold and not to a manufacturing method according to the present invention in which a deposition process is used (see Mimura at column 4, lines 30-33).

Therefore, even assuming *arguendo* that the teachings of Blankenship, Sharp and Mimura could be properly combined, the combination would nonetheless fail to teach all the limitations of claim 11. Accordingly, reconsideration and withdrawal of the rejection of claim 11 is respectfully requested.

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Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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